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By: Nancy Ramos Printed: Nancy Ramos

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Hillman et al.

Title: PROTEINS ASSOCIATED WITH EGF SIGNALING

Serial No.: To Be Assigned Filing Date: Herewith

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Official Draftsman

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Washington, D.C. 20231

SUBMISSION OF FORMAL DRAWINGS

Sir:

Transmitted herewith are Figure(s) 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 2A, 2B, 2C, 2D, 2E, and 3, as fourteen (14) sheets of formal drawings for this application. Each sheet of drawing indicates the identifying indicia suggested in 37 CFR Section 1.84(c) on the reverse side of the drawings.

Applicants believe that no fee is due with this paper. However, if the Commissioner determines that a fee is necessary, the Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. **09-0108. A duplicate copy of this communication is enclosed.**

If there are any questions regarding the above, the Examiner is invited to call the undersigned at 650-855-0555.

Respectfully submitted,
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| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| 5' | 9 | 18 | 27 | 36 | 45 | 54 |
| TTC | GTG | AAG | CAC | TCC | ATG | GAG |
| | | | | | | CAT |
| | | | | | | GTG |
| | | | | | | TCA |
| | | | | | | ATG |
| | | | | | | GCC |
| | | | | | | TGT |
| | | | | | | GTC |
| | | | | | | CAC |
| | | | | | | CTG |
| | | | | | | GCT |
| | | | | | | TCC |
| | | | | | | |
| | 63 | 72 | 81 | 90 | 99 | 108 |
| AAG | ATA | GAA | GAG | GCC | CCA | AGA |
| | | | | | | CGC |
| | | | | | | ATA |
| | | | | | | CGG |
| | | | | | | GAC |
| | | | | | | ATC |
| | | | | | | AAT |
| | | | | | | GTG |
| | | | | | | TTT |
| | | | | | | CAC |
| | | | | | | CGC |
| | | | | | | |
| | 117 | 126 | 135 | 144 | 153 | 162 |
| CTT | CGA | CAG | CTG | AGA | GAC | AAA |
| | | | | | | AAA |
| | | | | | | TAA |
| | | | | | | TCG |
| | | | | | | TTA |
| | | | | | | TGT |
| | | | | | | ACC |
| | | | | | | TTC |
| | | | | | | AGG |
| | | | | | | TGT |
| | | | | | | TAG |
| | | | | | | AGT |
| | | | | | | |
| | 171 | 180 | 189 | 198 | 207 | 216 |
| GTG | AGC | GTA | ACC | AAC | ACC | TGG |
| | | | | | | TCC |
| | | | | | | AGA |
| | | | | | | CCT |
| | | | | | | CAT |
| | | | | | | GGG |
| | | | | | | TAG |
| | | | | | | CCT |
| | | | | | | CTG |
| | | | | | | AGG |
| | | | | | | GTA |
| | | | | | | AGT |
| | | | | | | |
| | 225 | 234 | 243 | 252 | 261 | 270 |
| GAC | TAA | GAC | TTC | TCC | TCT | GCT |
| | | | | | | GTC |
| | | | | | | CAA |
| | | | | | | GCG |
| | | | | | | CTT |
| | | | | | | TGG |
| | | | | | | TGC |
| | | | | | | AGG |
| | | | | | | GAC |
| | | | | | | AGC |
| | | | | | | GGC |
| | | | | | | ATC |
| | | | | | | |
| | 279 | 288 | 297 | 306 | 315 | 324 |
| TTC | AGC | CAA | TCC | AGT | GCA | GGC |
| | | | | | | TCT |
| | | | | | | CCA |
| | | | | | | CCG |
| | | | | | | AAG |
| | | | | | | GCT |
| | | | | | | GGC |
| | | | | | | TCT |
| | | | | | | AGA |
| | | | | | | CTG |
| | | | | | | GTG |
| | | | | | | ACC |
| | | | | | | |
| | 333 | 342 | 351 | 360 | 369 | 378 |
| CCT | TGT | TGA | AAT | GGG | ACA | GTT |
| | | | | | | GGC |
| | | | | | | AGC |
| | | | | | | GGC |
| | | | | | | CCC |
| | | | | | | GAG |
| | | | | | | AAG |
| | | | | | | AGG |
| | | | | | | CCT |
| | | | | | | |
| | 387 | 396 | 405 | 414 | 423 | 432 |
| GCC | CTT | GGG | TGC | TGA | GTC | TCC |
| | | | | | | CTC |
| | | | | | | CGC |
| | | | | | | ATG |
| | | | | | | CTC |
| | | | | | | CCA |
| | | | | | | CGC |
| | | | | | | GTC |
| | | | | | | CAA |
| | | | | | | CTT |
| | | | | | | GCA |
| | | | | | | |
| | 441 | 450 | 459 | 468 | 477 | 486 |
| CCC | AAG | GGG | CTT | TTC | CCT | CTT |
| | | | | | | CCA |
| | | | | | | AGT |
| | | | | | | GGA |
| | | | | | | CTC |
| | | | | | | CAA |
| | | | | | | GGA |
| | | | | | | AGC |
| | | | | | | TGC |
| | | | | | | AGC |
| | | | | | | TGC |

FIGURE 1A

| | | | | | |
|---|-----|-----|-----|-----|-----|
| 495 | 504 | 513 | 522 | 531 | 540 |
| GTC AGC AGA GAA GGG GCC TGC CGC CAG CGC GGA GGA AGA GGA ACC | | | | | |
| 549 | 558 | 567 | 576 | 585 | 594 |
| CAA GAG GAT GGC TTG TCT CCC AGC AGC CAC ACC GGC TTT GTG CTC AGC CAG TTC | | | | | |
| 603 | 612 | 621 | 630 | 639 | 648 |
| ATT TGA GTT TGC ATG TTT CTC TGC ACT ATG GAT TTT GAG CAT TTA GAT TTC TTT | | | | | |
| 657 | 666 | 675 | 684 | 693 | 702 |
| AAT CAA AAG CGT TTT AGT GAC TCC AGT AGA CAT TTT CTT TCT GAG GCA TCG TGC | | | | | |
| 711 | 720 | 729 | 738 | 747 | 756 |
| TTT GCA TGA GAG CAG GCC AAG GTT GAG GGG AAA AGT AAA GTT AAA GTC GGT TCT | | | | | |
| 765 | 774 | 783 | 792 | 801 | 810 |
| CTT TCA TAG CAA CAC GTA TTG TCT GAC ATT CAG CCA GCT TTT TTT TCT TCT AAT | | | | | |
| 819 | 828 | 837 | 846 | 855 | 864 |
| AAT TTC TGT GCC TTT CTG TCC TGT ATT TAC TGT ATT TAG AAA AAG CAG CTA GAA | | | | | |
| 873 | 882 | 891 | 900 | 909 | 918 |
| TAT TTC TCC ATT AAC TCT TGA GAT TCA CAG GAC TGT CTA GCT CTG AGT CCT AGC | | | | | |
| 927 | 936 | 945 | 954 | 963 | 972 |
| AAT AGA CTC CTT AGA GGA GTA GTA CGT TTA TCT AGA TTT TCT CTA GAT AAT GCA | | | | | |

FIGURE 1B

| | | | | | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|
| 981 | 990 | 999 | 1008 | 1017 | 1026 |
| GGC GGA AGA | CCT GGG TTC | CCG GGT GGG | GCA TTG CAG | TTC CTG TGT | TTG GCT |
| 1035 | 1044 | 1053 | 1062 | 1071 | 1080 |
| TCC AGG AAT | TAC ATG AAC | GAC AGC CTT | CGC ACC GAC | GTC TTC GTG | CGG TTC CAG |
| M N D S L R T D V F R F Q | | | | | |
| 1089 | 1098 | 1107 | 1116 | 1125 | 1134 |
| CCA GAG AGC | ATC GCC TGT | GCC TGC ATT | TAT CTT GCT | GCC CGG ACG | CTG GAG ATC |
| P E S I A C A C A A A R T L E I | | | | | |
| 1143 | 1152 | 1161 | 1170 | 1179 | 1188 |
| CCT TTG CCC | AAT CGT CCC | CAT TGG TTT | CTT TTG TTT | GGA GCA ACT | GAA GAA GAA |
| P L P N R P H W F L L F G A T E E | | | | | |
| 1197 | 1206 | 1215 | 1224 | 1233 | 1242 |
| ATT CAG GAA | ATC TGC TTA | AAG ATC TTG | CAG CTT TAT | GCT CGG AAA | AAG GTT GAT |
| I Q E I C L K I L Q L Y A R K K V D | | | | | |
| 1251 | 1260 | 1269 | 1278 | 1287 | 1296 |
| CTC ACA CAC | CTG GAG GGT | GAA GTG GAA | AAA AGA AAG | CAC GCT ATC | GAA GAG GCA |
| L T H L E G E V E K R K H A I E E A | | | | | |
| 1305 | 1314 | 1323 | 1332 | 1341 | 1350 |
| AAG GCC CAA | GCC CGG GGC | CTG TTG CCT | GGG GGC ACA | CAG GTG CTG | GAT GGT ACC |
| K A Q A R G L L P G G T Q V L D G T | | | | | |

FIGURE 1C

| | | | | | |
|---|------|------|------|------|------|
| 1359 | 1368 | 1377 | 1386 | 1395 | 1404 |
| TCG GGG TTC TCT CCT GCC CCC AAG CTG GTG GAA TCC CCC AAA GAA GGT AAA GGG | | | | | |
| S G F S P A P K L V E S P K E G K G | | | | | |
| 1413 | 1422 | 1431 | 1440 | 1449 | 1458 |
| AGC AAG CCT TCC CCA CTG TCT GTG AAG AAC ACC AAG AGG AGG CTG GAG GGC GCC | | | | | |
| S K P S P L S V K N T K R L E G A | | | | | |
| 1467 | 1476 | 1485 | 1494 | 1503 | 1512 |
| AAG AAA GCC AAG GCG GAC AGC CCC GTG AAC GGC TTG CCA AAG GGG CGA GAG AGT | | | | | |
| K K A K A D S P V N G L P K G R E S | | | | | |
| 1521 | 1530 | 1539 | 1548 | 1557 | 1566 |
| CGG AGT CGG AGC CGG AGC CGT GAG CAG AGC TAC TCG AGG TCC CCA TCC CGA TCA | | | | | |
| R S R S R S R E Q S Y S R S P S R S | | | | | |
| 1575 | 1584 | 1593 | 1602 | 1611 | 1620 |
| GCG TCT CCT AAG AGG AGG AAA AGT GAC AGC GGC TCC ACA TCT GGT GGG TTC AAG | | | | | |
| A S P K R R K S D S G S T S G G S K | | | | | |
| 1629 | 1638 | 1647 | 1656 | 1665 | 1674 |
| TCG CAG AGC CGC TCC CGG AGC AGG AGT GAC TCC CCA CCG AGA CAG GCC CCC CGC | | | | | |
| S Q S R S R S R S D S P P R Q A P R | | | | | |
| 1683 | 1692 | 1701 | 1710 | 1719 | 1728 |
| AGC GCT CCC TAC AAA GGC TCT GAG ATT CGG GGC TCC CGG AAG TCC AAG GAC TGC | | | | | |
| S A P Y K G S E I R G S R K S K D C | | | | | |

FIGURE 1D

| | | | | | |
|---|------|------|------|------|------|
| 1737 | 1746 | 1755 | 1764 | 1773 | 1782 |
| AAG TAC CCC CAG AAG CCA CAC AAG TCT CGG AGC CGG AGT TCT TCC CGT TCT CGA | | | | | |
| K Y P Q K K P H K K S R S R S S S R S R | | | | | |
| 1791 | 1800 | 1809 | 1818 | 1827 | 1836 |
| AGC AGG TCA CGG GAG CGG GCG GAT AAT CCG GGA AAA TAC AAG AAG AAA AGT CAT | | | | | |
| S R S R E R A D N P G K Y K K K S H | | | | | |
| 1845 | 1854 | 1863 | 1872 | 1881 | 1890 |
| TAC TAC AGA GAT CAG CGA CGA GAG CGC TCG AGG TCG TAT GAA CGC ACA GGC CGT | | | | | |
| Y Y R D Q R R Q R E R S R S Y E R T G R | | | | | |
| 1899 | 1908 | 1917 | 1926 | 1935 | 1944 |
| CGC TAT GAG CGG GAC CAC CCT GGG CAC AGC AGG CAT CGG AGG TGA GGC GGG GTT | | | | | |
| R Y E R D H P G H S R H R R | | | | | |
| 1953 | 1962 | 1971 | 1980 | 1989 | 1998 |
| GCA GTG ACT GGT GGC CGC AAG CCC TTC CCT GGG GAG TAC CTG ATG GCT GCC CTT | | | | | |
| 2007 | 2016 | 2025 | 2034 | 2043 | 2052 |
| TGA CCC CCG GTG GCT GCC CTT TGA CCC CCG GGT GTG CTC TCA GCG CAA GTG GTC | | | | | |
| 2061 | 2070 | 2079 | 2088 | 2097 | 2106 |
| CTA GAA CAG GAT TCT TTT TGG AAA TGT CTG TCG ACT GGA CCT TCG TGG ATT TGG | | | | | |
| 2115 | 2124 | 2133 | 2142 | 2151 | 2160 |
| AAA TGG AAC TGA GGG ACC GGT GAC ACG TGC TTC AGA CCG GTC TGG GGT GCG GCG | | | | | |

FIGURE 1E

| | | | | | |
|---|------|------|------|------|------|
| 2169 | 2178 | 2187 | 2196 | 2205 | 2214 |
| CAC ACC TGG GCC CGT GCA GGG CTC AGC TCG GCA GCA GCT CTG AGG GCA GCT CAA | | | | | |
| 2223 | 2232 | 2241 | 2250 | 2259 | 2268 |
| TGA AAA AGT GAA TGC ACA CGC CCT TGT TGG CGT GGC CTG GCA TGG CCT GGT GCT | | | | | |
| 2277 | 2286 | 2295 | 2304 | 2313 | 2322 |
| ATC GGC AGC CGC TCT CCA CTC CCC GAC TGA TAC TCA ATT AGC TGA AGC CAA GAA | | | | | |
| 2331 | 2340 | 2349 | 2358 | 2367 | 2376 |
| AGA TGA TTT TTA GAA CCT TTG CCT ATA TTA GGT TGT ACT TAT GTA CAT ATT TTG | | | | | |
| 2385 | 2394 | 2403 | 2412 | 2421 | 2430 |
| CAG TGT TTC ACA GGA GAA AGT GGC CTT AAC TGC CCC TTA TTC TCT CTC CAC GTT | | | | | |
| 2439 | 2448 | 2457 | 2466 | 2475 | 2484 |
| GTA AAT AAA CAT GTG TTT AAT ACA AGT TAA AGC TAT GTA TGA AAA CTC AGA ACT | | | | | |
| 2493 | 2502 | 2511 | 2520 | 2529 | 2538 |
| TGA ATC CCG TCA GCT TAA AAC TTG TGT AGG GAA TCC TGA CTT TTA AAA TGT GAG | | | | | |
| 2547 | 2556 | 2565 | 2574 | 2583 | 2592 |
| GGT ATT TGG ATC TGT GTT GAA AGT CGT ATA TTT TTA TCT GTG CGG TGC TGA GTG | | | | | |
| 2601 | 2610 | 2619 | 2628 | 2637 | 2646 |
| CAG GCC ACC AGC TCC TAA ATA GAG GTT CCC TAT ATG CGC GTA TGA CAT GGT GAA | | | | | |

FIGURE 1F

| | | | | | |
|---|------|------|------|------|------|
| 2655 | 2664 | 2673 | 2682 | 2691 | 2700 |
| TAA ACA CAA CTC TCT CCA CTC AGG ACA TCC GGA GCG TTA TGG ACG TGG TAG GTG | | | | | |
| 2709 | 2718 | 2727 | 2736 | 2745 | 2754 |
| GTC GTT CTG TGT GCT TGT GAA AGT GTC CAG GCG TGT GCA CAG CCA GTG CGC CCA | | | | | |
| 2763 | 2772 | 2781 | 2790 | 2799 | 2808 |
| CTT CCG GGC TCC TTG CTC CCT GCT GTA CTG AAG TTT TGG ATT TTG CAT CCA ATC | | | | | |
| 2817 | 2826 | 2835 | 2844 | 2853 | 2862 |
| CTG TGT GCC TGC CCT TCT GCC GAA GCT TGT GAG GGG CCT GAG TCC TCT GCC CAT | | | | | |
| 2871 | 2880 | 2889 | 2898 | 2907 | 2916 |
| CAG GAT GAC AGG CTC CTT CCT GCA GGG CCA TAG GAG GGA AGT TTT GGA AAC ACA | | | | | |
| 2925 | 2934 | 2943 | 2952 | 2961 | 2970 |
| GAA TGA TTC CAA GGT GCT CTC GTT CCT GAG GGG GAC TGG TTT GTA ACC CAT GAC | | | | | |
| 2979 | 2988 | 2997 | 3006 | 3015 | 3024 |
| ATC TGT GGG CGA GAG AGG CAG CTG GGA GCA GGA CAC TTG GAG GGT CAC CCC ACG | | | | | |
| 3033 | 3042 | 3051 | 3060 | 3069 | 3078 |
| GGG GTG GCA CCT GCA CTC TGA GTG CCC CCC ACT GTC ATC AGC TGC CTC TTA CCG | | | | | |
| 3087 | 3096 | 3105 | 3114 | 3123 | 3132 |
| TGG ACA CAG TTT TGG TTT TGG GGA CTA GGG GGC CCC ACT CCT GGT GGT ACC GTT | | | | | |

FIGURE 1G

3141 TGG ACT TAC TAG GGC AGT GGG ACA TAT AGG CCG GGG CTA GTG GGA TAA CGG GGA 3186
 3195 GTT ACG CCT GAT GAC TTT TTT GAT GGA ATC CTG CAT TAG ATA GCT GGT GGG ACC 3240
 3249 CCC CCC TCA GAA TTG GGG AAC TGA GGA GAC TCC AGG GAG GGT GTC CTT CCA GGG 3294
 3303 AGA GCA GCT ATG AGG GGC CCC CTA GCT TCC TGT GCC TGG AAG TAA GAG AAC CAG 3348
 3357 TAA AGG GCC ATA CAC ACC TGT ACC CAA GAG ACC GCT CTC CAT TTG CTT TCT TTT 3402
 3411 TTT ACT AAA TAA TTG TAA AAT ATT ATT ATG ACA TAA AGA ACC ATT TAA GGC CAA 3456

AAA AAA AA 3'

FIGURE 1H

| | | | | | |
|---|-----|-----|-----|-----|-----|
| 10 | 19 | 28 | 37 | 46 | 55 |
| 5' GCCT CCC TGT CCC CCG ACC CTC TTT TGA TGC CTC AGC AAG TGA AGA GGA GGA AGA | | | | | |
| 64 | 73 | 82 | 91 | 100 | 109 |
| AGA GGA GGA GGA GGA TGA AGA TGA AGA GGA AGT GGC AGC TTG GAG GCT | | | | | |
| 118 | 127 | 136 | 145 | 154 | 163 |
| GCC CCC AAG ATG GAG TCA GCT GGG AAC CTC CCA GCG GCC CCC TTC CCG CCC | | | | | |
| 172 | 181 | 190 | 199 | 208 | 217 |
| CAC TCA TCG AAA AAC CTG CTC ACA GCG CCG CCG AGC CAT GAG AGC CTT CCG | | | | | |
| 226 | 235 | 244 | 253 | 262 | 271 |
| GAT GCT GCT CTA CTC AAA AAG CAC CTC GCT GAC ATT CCA CTG GAA GCT TTG GGG | | | | | |
| 280 | 289 | 298 | 307 | 316 | 325 |
| GCG CCA CCG GGG CCG GCG GCG CCT CGC ACA CCC CAA GAA CCA TCT TTC ACC | | | | | |
| 334 | 343 | 352 | 361 | 370 | 379 |
| CCA GCA AGG GGG TGC GAC GCC ACA GGT GCC ATC CCC CTG TTG TCG TTT TGA CTC | | | | | |
| 388 | 397 | 406 | 415 | 424 | 433 |
| CCC CCG GGG GCC ACC TTC ACC CCG GCT GGT GGT TCT GCT AGG TGC TCT CAT GGC TGA | | | | | |
| 442 | 451 | 460 | 469 | 478 | 487 |
| GGA TGG GGT GAG AGG CTC TCC ACC AGT GCC CTC TGG GCC CCC CAT GGA GGA AGA | | | | | |

FIGURE 2A

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 496 | TGG | ACT | CAG | GTG | GAC | TCC | AAA | GTC | TCC | TCT | GGA | CCC | TGA | CTC | GGG | CCT | CCT | TTC | 541 |
| 505 | | | | | | | | | | | | | | | | | | | |
| 514 | | | | | | | | | | | | | | | | | | | |
| 550 | ATG | TAC | TCT | GCC | CAA | CGG | TTT | TGG | GGG | ACA | ATC | TGG | GCC | AGA | AGG | GGA | GCG | CAC | 595 |
| 559 | | | | | | | | | | | | | | | | | | | |
| 568 | | | | | | | | | | | | | | | | | | | |
| 604 | TTG | GCA | CCC | CCT | GAT | GCC | AGC | ATC | CTC | ATC | AGC | AAT | GTG | TGC | AGC | ATC | GGG | GAC | 649 |
| 613 | | | | | | | | | | | | | | | | | | | |
| 622 | | | | | | | | | | | | | | | | | | | |
| 658 | CAT | GTG | GCC | CAG | GAG | CTT | TTT | CAG | GGC | TCA | GAT | TTG | GGC | ATG | GCA | GAA | GAG | GCA | 703 |
| 667 | | | | | | | | | | | | | | | | | | | |
| 676 | | | | | | | | | | | | | | | | | | | |
| 712 | GAG | AGG | CCT | GGG | GAG | AAA | GCC | GGC | CAG | CAC | AGC | CCC | CTG | CGA | GAG | GAG | CAT | GTG | 757 |
| 721 | | | | | | | | | | | | | | | | | | | |
| 730 | | | | | | | | | | | | | | | | | | | |
| 766 | ACC | TGC | GTA | CAG | AGC | ATC | TTG | GAC | GAA | TTT | CTT | CAA | ACG | TAT | GGC | AGC | CTC | ATA | 811 |
| 775 | | | | | | | | | | | | | | | | | | | |
| 784 | | | | | | | | | | | | | | | | | | | |
| 829 | CCC | CTC | AGC | ACT | GAT | GAG | GTA | GTA | GAG | AAG | CTG | GAG | GAC | ATT | TTC | CAG | CAG | GAG | 865 |
| 838 | | | | | | | | | | | | | | | | | | | |
| 847 | | | | | | | | | | | | | | | | | | | |
| 856 | | | | | | | | | | | | | | | | | | | |

FIGURE 2B

| | | | | | |
|---|------|------|------|------|------|
| 874 | 883 | 892 | 901 | 910 | 919 |
| TTT TCC ACC CCT TCC AGG AAG GGC CTG GTG TTG CAG CTG ATC CAG TCT TAC CAG | | | | | |
| F S T P S R K G L V L Q L I Q S Y Q | | | | | |
| 928 | 937 | 946 | 955 | 964 | 973 |
| CGG ATG CCA GGC AAT GCC ATG GTG AGG GGC TTC CGA GTG GCT TAT AAG CGG CAC | | | | | |
| R M P G N A M V R G F R V A Y K R H | | | | | |
| 982 | 991 | 1000 | 1009 | 1018 | 1027 |
| GTG CTG ACC ATG GAT GAC TTG GGG ACC TTG TAT GGA CAG AAC TGG CTC AAT GAC | | | | | |
| V L T M D D L G T L Y G Q N W L N D | | | | | |
| 1036 | 1045 | 1054 | 1063 | 1072 | 1081 |
| CAG GTG ATG AAC ATG TAT GGA GAC CTG GTC ATG GAC ACA GTC CCT GAA AAG GTG | | | | | |
| Q V M N M Y G G D L V M D T V P E K V | | | | | |
| 1090 | 1099 | 1108 | 1117 | 1126 | 1135 |
| CAT TTC TTC AAT AGT TTC TTC TAT GAT AAA CTC CGT ACC AAG GGT TAT GAT GGG | | | | | |
| H F F N S F F Y D K L R T K G Y D G | | | | | |
| 1144 | 1153 | 1162 | 1171 | 1180 | 1189 |
| GTG AAA AGG TGG ACC AAA AAC GTG GAC ATC TTC AAT AAG GAG CTA CTG CTA ATC | | | | | |
| V K R W T K N V D I F N K E L L I | | | | | |
| 1198 | 1207 | 1216 | 1225 | 1234 | 1243 |
| CCC ATC CAC CTG GAG GTG CAT TGG TCC CTC ATC TCT GTT GAT GTG AGG CGA CGC | | | | | |
| P I H L E V H W S L I S V D V R R R | | | | | |

FIGURE 2C

| | | | | | |
|------|--|------|------|------|------|
| 1252 | ACC ATC ACC TAT TTT GAC TCG CAG CGT ACC CTA AAC CGC CGC TGC CCT AAG CAT | 1270 | 1279 | 1288 | 1297 |
| | T I T Y F D S Q R T L N R C P K H | | | | |
| 1306 | ATT GCC AAG TAT CTA CAG GCA GAG GCG GTA AAG AAA GAC CGA CTG GAT TTC CAC | 1324 | 1333 | 1342 | 1351 |
| | I A K Y L Q A E A V K K D R L D F H | | | | |
| 1360 | CAG GGC TGG AAA GGT TAC TTC AAA ATG AAT GTG GCC AGG CAG AAT AAT GAC AGT | 1378 | 1387 | 1396 | 1405 |
| | Q G W K G Y F K M N V A R Q N N D S | | | | |
| 1414 | GAC TGT GGT GCT TTT GTG TTG CAG TAC TGC AAG CAT CTG GCC CTG TCT CAG CCA | 1432 | 1441 | 1450 | 1459 |
| | D C G A F V L Q Y C K H L A L S Q P | | | | |
| 1468 | TTC AGC TTC ACC CAG CAG GAC ATG CCC AAA CTT CGT CGG CAG ATC TAC AAG GAG | 1486 | 1495 | 1504 | 1513 |
| | F S F T Q Q D M P K L R R Q I Y K E | | | | |
| 1522 | CTG TGT CAC TGC AAA CTC ACT GTG TGA GCC TCG TAC CCC AGA CCC CAA GCC CAT | 1540 | 1549 | 1558 | 1567 |
| | L C H C K L T V | | | | |
| 1576 | AAA TGG GAA GGG AGA CAT GGG AGT CCC TTC CCA AGA AAC TCC AGT TCC TTTT CCT | 1594 | 1603 | 1612 | 1621 |
| | | | | | |

FIGURE 2D

| | | | | | |
|---|------|------|------|------|------|
| 1630 | 1639 | 1648 | 1657 | 1666 | 1675 |
| CTC TTG CCT CTT CCC ACT CAC TTC CCT TTG GTT TTT CAT ATT TAA ATG TTT CAA | | | | | |
| 1684 | 1693 | 1702 | 1711 | 1720 | 1729 |
| TTT CTG TAT TTT TTT TTC TTT GAG AGA ATA CTT GTT GAT TTC TGA TGT GCA GGG | | | | | |
| 1738 | 1747 | 1756 | 1765 | 1774 | 1783 |
| GGT GGC TAC AGA AAA GCC CCT TTC TTC CTC TGT TTG CAG GGG AGT GTG GCC CTG | | | | | |
| 1792 | 1801 | 1810 | 1819 | 1828 | 1837 |
| TGG CCT GGG TGG AGC AGT CAT CCT CCC CCT TCC CCG TGC AGG GAG CAG GAA ATC | | | | | |
| 1846 | 1855 | 1864 | 1873 | 1882 | 1891 |
| AGT GCT GGG GGT GGT GGG CGG ACA ATA GGA TCA CTG CCT GCC AGA TCT TCA AAC | | | | | |
| 1900 | 1909 | 1918 | 1927 | 1936 | 1945 |
| TTT TAT ATA TAT ATA TAT ATA TAT ATA TAT ATA TAT ATA TAT | | | | | |
| 1954 | 1963 | 1972 | 1981 | 1990 | |
| ATA TAA ATA TAT AAA TGC CAC GGT CCT GCT CTG GTC AAT AAA GAT C 3' | | | | | |

FIGURE 2E

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|------------|---|---|---|---|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|---|------------|------------|
| 137 | L | E | G | A | K | K | A | K | A | D | S | P | V | N | G | L | P | K | G | R | E | S | R | S | R | S | R | E | 1281694 | | | |
| 1 | M | E | G | P | K | K | A | Q | G | H | S | P | V | N | G | L | L | K | G | Q | E | S | R | S | Q | S | R | S | R | E | GI 1276645 | |
| 167 | Q | S | Y | S | R | S | P | S | R | S | A | S | P | K | R | R | K | S | D | S | G | S | T | S | G | G | S | K | S | Q | 1281694 | |
| 31 | Q | S | Y | S | R | S | P | S | R | S | A | S | P | K | R | R | K | S | D | S | G | S | T | S | G | G | S | K | S | Q | GI 1276645 | |
| 197 | S | R | S | R | S | R | S | D | S | P | P | R | Q | A | P | R | S | A | P | Y | K | G | S | E | I | R | G | S | R | K | 1281694 | |
| 61 | S | R | S | R | S | R | S | D | S | P | P | R | Q | V | H | R | G | A | P | Y | K | G | S | E | V | R | G | S | R | K | GI 1276645 | |
| 227 | S | K | D | C | K | Y | - | P | Q | K | P | H | K | S | R | S | R | S | S | S | S | R | S | R | S | R | S | R | E | R | A | 1281694 |
| 91 | S | K | D | C | K | Y | L | T | Q | K | P | H | K | S | R | S | R | S | S | S | S | R | S | R | S | R | S | R | E | R | T | GI 1276645 |
| 256 | D | N | F | G | K | Y | K | K | K | S | H | Y | Y | R | D | Q | R | R | E | R | S | R | S | S | Y | E | R | T | G | R | R | 1281694 |
| 121 | D | N | S | G | K | Y | K | K | K | S | H | Y | Y | R | D | Q | R | R | E | R | S | R | S | S | Y | E | R | T | G | H | R | GI 1276645 |
| 286 | Y | E | R | D | H | P | G | H | S | R | H | R | R | 1281694 | | | | | | | | | | | | | | | | | | |
| 151 | Y | E | R | D | H | P | G | H | S | R | H | R | R | C | D | R | I | S | G | G | C | P | W | S | L | P | V | G | H | T | GI 1276645 | |
| 298 | L | A | S | V | A | L | 1281694 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 181 | L | A | S | V | A | L | GI 1276645 | | | | | | | | | | | | | | | | | | | | | | | | | |

FIGURE 3